INSTALLATION/OPERATION

Receiver for LWM41 Legacy® Series Mount

LRD41A11 Series

CE

C553M-C (3/03)

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IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should be done only by qualified service personnel and conform to all local codes.

2. Only use replacement parts recommended by Pelco.

3. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.

The product and/or manual may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF ELECTRIC SHOCK. DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

DESCRIPTION

The LRD41A11 Series Legacy® system fixed speed receiver is designed for use with Pelco's LWM41 wall mount. Standard features include pan/tilt control, camera power, zoom lens control, wiper control, and scan capabilities.

MODELS

LRD41A11-1	Legacy fixed speed receiver, 120 VAC input (FCC)
LRD41A11-2	Same as LRD41A11-1 except 24 VAC input (CE, FCC)
LRD41A11-3	Same as LRD41A11-1 except 230 VAC input (CE)

INSTALLATION

CABLE AND WIRING PREPARATION METHODS

There are four methods of installing the LWM41 wall mount. Cables can be fed directly into the rear of the LWM41 or through the bottom of the mount arm. Conduit plates are supplied for added flexibility of installation. A rear entry, knock-off plate is supplied with the mount arm and a bottom entry, gland/conduit plate is supplied with the LRD41A11 Series receiver.

Refer to one of the following sections to prepare wiring and cabling for your installation:

Rear Entry Without Conduit
Rear Entry With Conduit
Bottom Entry Without Conduit
Bottom Entry With Conduit

REAR ENTRY WITHOUT CONDUIT

1. Pull the cabling into and through the rear entry of the LWM41 wall mount. Feed the power cable through the right side of the mount and the video/auxiliary/alarm cables through the left side of the mount. Leave enough slack for connections, preferably four to six inches.

2. Install LWM41 wall mount (refer to the installation instructions supplied with the mount).

3. Proceed to *Installing the Switch Bracket*.

REAR ENTRY WITH CONDUIT

1. Secure the cable conduit to the block-off plate supplied with the LWM41 wall mount.

2. Pull the cabling into and through the rear of the mount. Feed the power cable through the right side of the mount and the video/auxiliary/alarm cables through the left side of the mount. Leave enough slack to make all connections (preferably four to six inches).

3. Install LWM41 wall mount (refer to the installation instructions supplied with the mount).

4. Proceed to *Installing the Switch Bracket*.

BOTTOM ENTRY WITHOUT CONDUIT

1. Install LWM41 wall mount (refer to the installation instructions supplied with the mount).

2. Remove the bottom plate of the mount arm and replace with the gland/conduit plate provided with the LRD41A11 Series receiver.

3. Install the glands into the gland plate. Thread cabling/wiring through the glands. Do not install the BNC connector to the video cable before threading the cable through the gland. The BNC connector will not fit through the PG-13 gland. Do not use a gland sealing compound at this time.

4. Feed the power cable through the right side of the mount and the video/auxiliary/alarm cables through the left side. Leave adequate slack for connections.

5. Tighten the glands and secure the gland/conduit plate to the bottom of the mount arm.

6. Install the BNC connector to the video cable.

7. Proceed to *Installing the Switch Bracket*.

BOTTOM ENTRY WITH CONDUIT

1. Install LWM41 wall mount (refer to the installation instructions supplied with the mount).
2. Remove the bottom plate of the mount arm and replace with the gland/conduit plate provided with the LRD41A11 Series receiver.
3. Secure the conduit to the gland/conduit plate.
4. Feed the power cable through the right side of the mount and the video/auxiliary/alarm cables through the left side. Leave adequate slack for connections.
5. Secure the gland/conduit plate to the bottom of the mount arm.
6. Proceed to *Installing the Switch Bracket*.

INSTALLING THE SWITCH BRACKET

1. Connect the power cable to the terminal block located on the bottom of the switch bracket (refer to Figure 1). Make sure the ground is connected for 120 VAC and 230 VAC operation.

NOTE: If the cable cannot be retracted from the mount, push it into the cavity behind the hinge base.

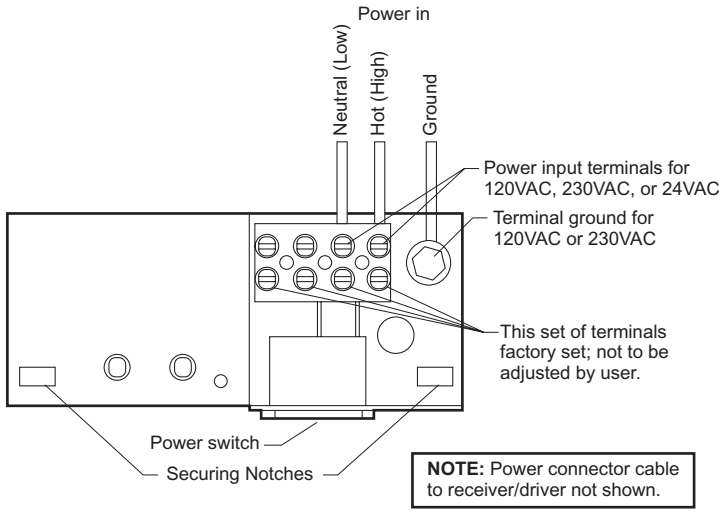
Power in
Neutral (Low)
Hot (High)
Ground
Power input terminals for 120VAC, 230VAC, or 24VAC
Terminal ground for 120VAC or 230VAC
This set of terminals factory set; not to be adjusted by user.
Power switch
Securing Notches
NOTE: Power connector cable to receiver/driver not shown.
01280

Figure 1. Switch Bracket Power Terminal Connections

2. Install the switch bracket inside the mount arm:
   a. Refer to Figure 2. Insert the notch on the right side of the switch bracket into the tab located in the back, right side of the mount arm.
   b. Push up on the bracket to depress the bottom bow spring.
   c. Refer to Figure 3. Twist the left side of the bracket until the left notch clicks into place under the left tab.
   d. Make sure the tabs “click” into the securing notches of the bracket for a secure fit. You may have to pull the bracket down into place.

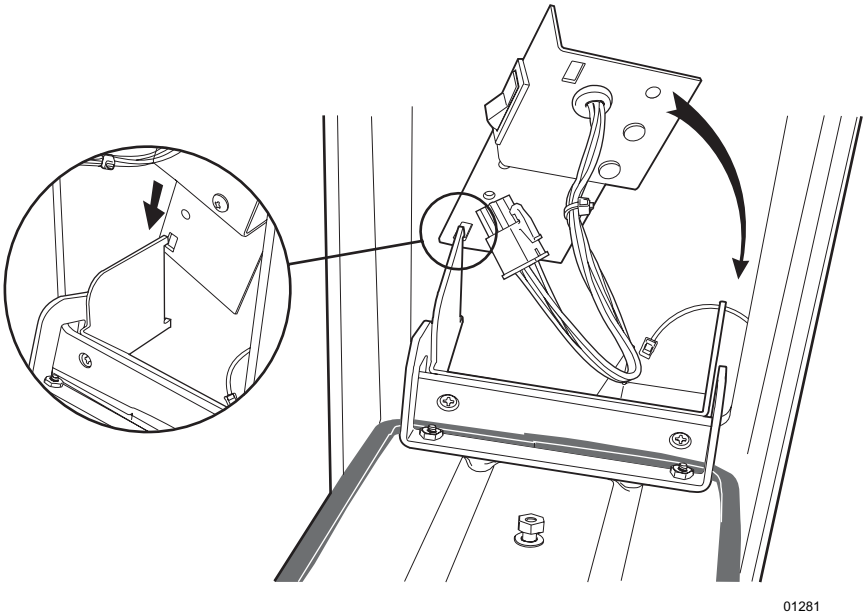

Figure 2. Installing Switch Bracket, Steps A and B

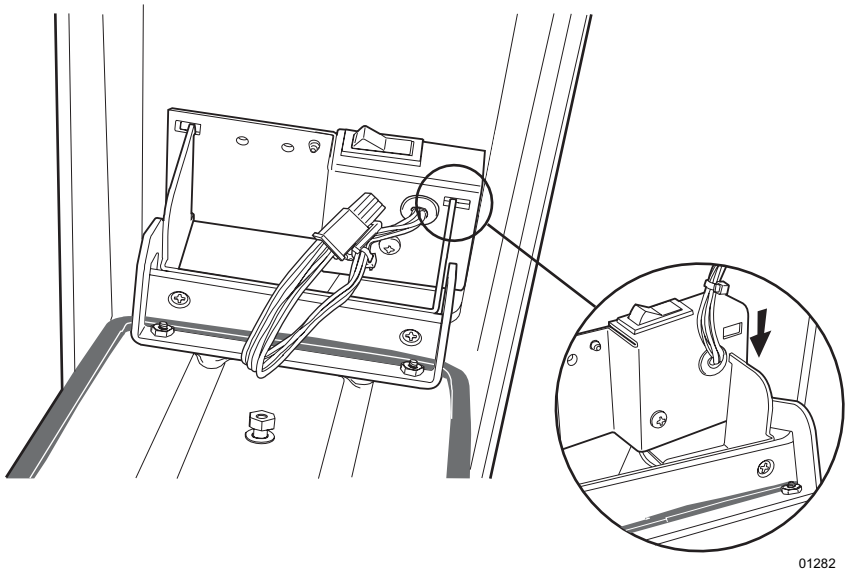

Figure 3. Installing Switch Bracket, Steps C and D

INSTALLING THE LRD41A11 SERIES RECEIVER

NOTE: The LRD41A1 Series receiver accommodates an additional electrical (coax) connection to the camera for camera synchronization, which is necessary when multiple cameras require frame synchronization.

The receiver box attaches to the inside access panel of the mount.

1. Refer to Figure 4 and install the mounting hardware for the LRD41A11 Series receiver.
2. Connect the video BNC and the switch bracket power connector to the rear of the receiver box.

   NOTE: The power connector clicks and locks into place. After making the connection, move the power switch (located inside the mount arm) to ON. Check the power LED on the receiver box for confirmation of power. Then turn off the switch.

3. Mount the receiver box to the access panel by simply aligning the two mounting holes on the bottom of the receiver box with the anchor and thumbnut hardware on the access panel (refer to Figure 4). After aligning the mounting holes/studs, simply slide the receiver box down over the anchor and thumbnut and allow the box to attach securely.
4. Tighten the locking thumbnut stud to secure the box in place. Make sure the thumbnut is very tight.
5. Refer to Figure 5 and connect the Legacy 37-pin, pan/tilt connector to the receiver box.

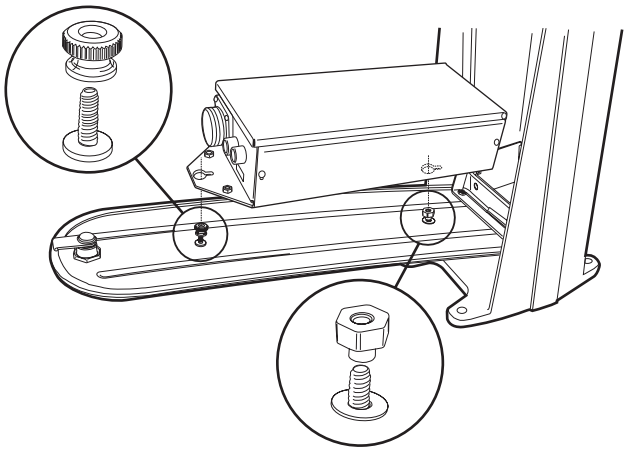

Figure 4. Installing the LRD41A11 Series Receiver

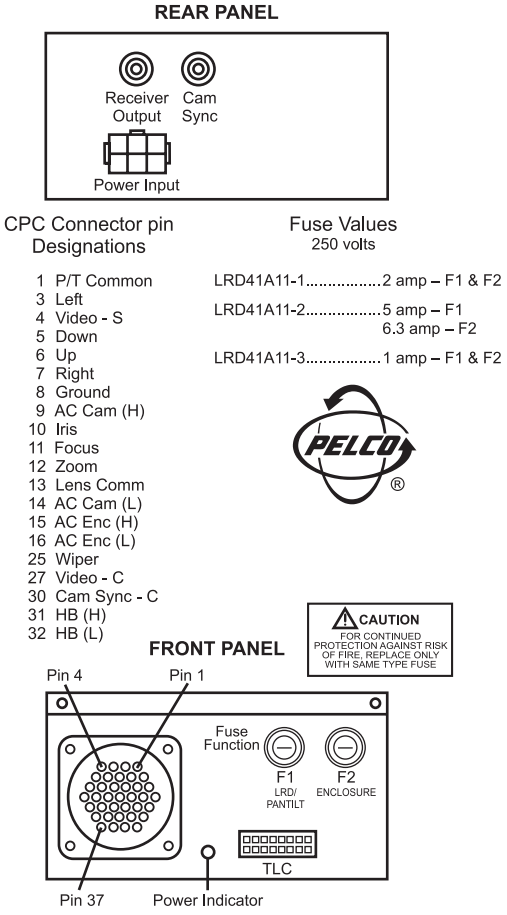

Figure 5. LRD41A11 Series Receiver Cable Connectors

CHANGING CAMERA VOLTAGE

Set the camera voltage jumpers for the voltage that the camera will use. Refer to Figure 6 for the locations and settings for the jumpers.

WARNING: CAMERA DAMAGE POSSIBLE. You will damage your camera if you connect it to the wrong connector on an EH4700L or EH5700L Series enclosure. If your camera will use the same power as the enclosure, plug the camera into the CAM1 socket on the circuit board inside the enclosure. If your camera will use 24 VAC and the enclosure will use either 120 VAC or 230 VAC, plug the camera into the CAM2 socket only.

If your camera will use 24 VAC, do NOT plug the camera into the CAM1 socket or you will damage your camera. CAM1 has either 120 VAC or 230 VAC on it.

BE CAREFUL – REMEMBER – CAM1 IS ENCLOSURE POWER. NEVER PLUG YOUR CAMERA INTO CAM1 IF THE CAMERA'S VOLTAGE IS DIFFERENT FROM THE ENCLOSURE'S VOLTAGE.

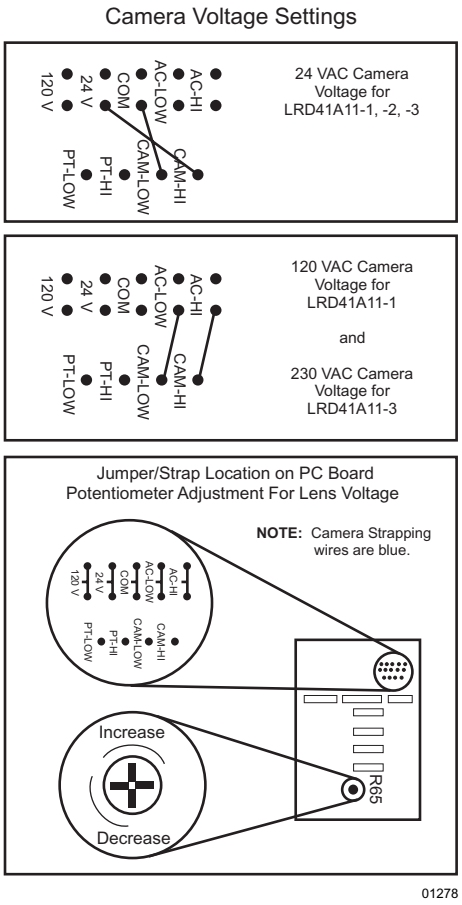

Figure 6. Camera Voltage Settings

OPERATION

CONTROL WITHOUT VIDEO

With this feature, the receiver can detect Coaxitron® commands from the controller when no video signal is present. Control without video is mainly desired for the auxiliary function.

NOTE: The MPT9000, and the CM8500 and CM9500 families of controllers will transmit Coaxitron commands without reception of video (composite sync) signal.

TRANSIENT SUPPRESSION

Transient suppression circuitry that has been designed into the LRD41A11-X receiver reduces the chance of interrupted operation or damage to the receiver due to voltage spikes on the power and signal lines. Transient suppression does not imply lightning suppression.

AUTO/RANDOM SCAN OPERATION

Depending on the type of control unit you have, auto and random scan can be operated in two ways:

- Use the Auto/Man switch or keys (if your control unit has these functions)
- Use presets

Auto/Man Switch – The random scan and auto scan functions are controlled by the same momentary switch on the control panel labeled Auto and Man.

The first activation of the switch to the Auto position puts the pan/tilt into random scan. In random scan operation, the pan/tilt travels between the preset limits with a random scan period of about 2 to 30 seconds, and a random dwell period of between 2 and 30 seconds. Following a dwell period, another random scan period starts. The direction of this scan period is also randomly determined. When a pan limit is reached, scan direction reverses automatically.

A second activation of the Auto switch puts the pan/tilt into continuous duty auto scan (limit switch to limit switch). After approximately 1/2 hour of auto scan, the circuit resets to random scan.

Subsequent operations of the Auto switch while in random scan mode cause a shift to auto scan mode and start the 1/2-hour timer. Operating the Auto switch while in auto scan mode causes a shift to the random scan mode and zeros the 1/2-hour timer.

Presets – Auto and random scan also can be started by programming presets. The presets work only when your system is configured for Extended (32-bit) Coaxitron mode.

Refer to your controller documentation for programming presets.
Preset 96 stops a scan.
Preset 97 starts random scan.
Preset 99 starts auto scan.

Advantages of random scan:

- Because scan direction, scan period, and dwell period are unpredictable, unauthorized activities or intrusions are discouraged.
- Because of the reduced duty cycle, gear train wear, cable fatigue, drive motor wear, and temperature rise are reduced. These factors all contribute to higher system reliability and increased equipment life.

TEST LOCAL CONTROL (TLC)

This feature allows you to connect an LRD41TLC test local control (TLC) module to the receiver to test the control of pan, tilt, and lens functions locally. This is convenient for positioning limit stops, backfocusing, and troubleshooting the installation. The TLC module also allows positioning of the camera locally.

To use the TLC module:

1. Plug the 16-pin connector from the TLC module into the TLC connector on the receiver (refer to Figure 5). You can plug in the module when power for the receiver is turned on.
2. Hold down the keys on the TLC module to operate the pan, tilt, and camera functions. The receiver does not have to be connected to other control equipment in order for the TLC module to work. If the receiver is connected to other control equipment, the TLC module will override any transmitter control signals from the other control equipment.

SPECIFICATIONS

ELECTRICAL

Input Voltage:

LRD41A11-1

Input Voltage:	120 VAC
P/T Voltage:	120 VAC
Camera Voltage:	24 VAC or 120 VAC (selectable)
Enclosure Voltage:	120 VAC

LRD41A11-2

Input Voltage:	24 VAC
P/T Voltage:	24 VAC
Camera Voltage:	24 VAC
Enclosure Voltage:	24 VAC

LRD41A11-3

Input Voltage:	230 VAC
P/T Voltage:	120 VAC
Camera Voltage:	24 VAC or 230 VAC (selectable)
Enclosure Voltage:	230 VAC

Frequency:	60/50 Hz
Power Consumption:	5 VA
Video Input:	75 ohms terminating
Video Output:	75 ohms terminating
Video Bandwidth:	10 MHz
Video Gain:	Unity
Video Formats:	NTSC or PAL
Control Method:	Coaxitron, 15-bit protocol
Lens Output	
Voltage:	6 VDC to 10 VDC
Current:	25 mA @ 10 VDC 100 mA @ 9 VDC

Operating Distances: Cable distances are approximate according to cable type used. 75-ohm coax required.

Cable Type	Distance		Distance Using EA2000	
RG59/U	750 ft	(229 m)	3,000 ft	(914 m)
RG6/U	1,000 ft	(305 m)	4,500 ft	(1,372 m)
RG11/U	1,500 ft	(457 m)	6,000 ft	(1,829 m)
RG15	—		8,000 ft	(2,438 m)

Fuse Values:

	F1 LRD/PANTILT	F2 ENCLOSURE
LRD41A11-1	2 amp	2 amp
LRD41A11-2	5 amp	6.3 amp
LRD41A11-3	1 amp	1 amp

MECHANICAL

Case Dimensions:	11.5 (L) x 4.5 (W) x 2.75 (H) inches (29.21 x 11.43 x 6.98 cm)
Finish:	Alodine
Video Connectors:	BNC
Pan/Tilt Connector:	37-pin CPC
Power Connector:	Plastic, interlocking (female)
Weight	
Unit:	5 lb (2.27 kg)
Shipping:	6 lb (2.72 kg)

ENVIRONMENTAL

Operating Temperature Range:	0°F to 120°F (-17.7°C to 48.8°C)

CERTIFICATIONS/RATINGS

CE, Class A (LRD41A11-2 and LRD41A11-3)
FCC, Class A (LRD41A11-1 and LRD41A11-2)
Meets NEMA Type 4 standards when installed in LWM41 wall mount

WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment. Exceptions to this warranty are as noted below:

- Five years on Pelco manufactured cameras (CC3500/CC3600/CC3700 and MC3500/MC3600 Series); two years on all other cameras.
- Three years on Genex® Series (multiplexers, server, and keyboard) and 090 Series Camclosure® Camera System.
- Two years on 100/150, 200 and 300 Series Camclosure® Camera Systems.
- Two years on all standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM8500/CM9500/CM9740/CM9760 Matrix, DF5 and DF8 Series Fixed Dome products.
- Two years on Spectra®, Esprit®, and PS20 Scanners, including when used in continuous motion applications.
- Two years on Esprit and WW5700 series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico:

Intermediate Consignee
American Overseas Air Freight
320 Beach Road
Burlingame, CA 94010
USA

Ultimate Consignee
Pelco
3500 Pelco Way
Clovis, CA 93612-5699
USA

REVISION HISTORY

Manual #	Date	Comments
C553M	9/95	Original version.
C553M-A	8/96	Revised Sections 5.0 and 9.0, and changed the operating distances for coaxial cables in Section 10.0.
C553M-B	11/01	Revised manual to meet new design specifications. Updated manual to new format.
C553M-C	3/03	Revised figures 4 and 5 and the specifications to reflect the addition of a second fuse (ECO 03-8663).

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